UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,421	03/22/2004	Hans-Ove Hagelin	19378.55692	9305

23517 7590 08/04/2005	EXAMINER	
SWIDLER BERLIN LLP	DATSKOVSKIY, SERGEY	
3000 K STREET, NW		
BOX IP	ART UNIT	PAPER NUMBER
WASHINGTON, DC 20007	2121	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/805,421	HAGELIN, HANS-OVE
	Examiner	Art Unit
	Sergey Datskovskiy	2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 March 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 March 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All   b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>25 May 2004</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-30 have been submitted for examination.

2.   Claims 1-30 have been rejected.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3.   The abstract of the disclosure is objected to because of the use of legal

phraseology "means" on lines 7 and 11 and "said" on line 11. Correction is required.

See MPEP § 608.01(b).

Claim Objections

4.   Claims 7, 12, 17 and 19 are objected to because of the following informalities:

a.   The phrase "at least different rules" in claim 7 and 12 is grammatically

incorrect. Examiner suggests replacing it with "at least one distinctive rule".

b.   A word "command" is misspelled as "commend" on line 2 of claim 17.

c.   The phrase "at least one parameters" in the line 2 of claim 19 is grammatically incorrect.

Appropriate correction is required.

Claim 22 recites the limitation "the first means" in line 12 and "said second means" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "said first means" in line 12 and "said second means" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. §101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5.   The invention as disclosed in claims 1-21, 23 and 27-28 is directed to non-statutory subject matter.

Regardless of whether any of the claims are in the technological arts, none of them is limited to practical applications in the technological arts. Examiner finds that *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994) controls the 35 U.S.C. §101 issues on that point for reasons made clear by the Federal Circuit in *AT&T Corp. v. Excel Communications, Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999). Specifically, the Federal Circuit held that the act of:

> ...[T]aking several abstract ideas and manipulating them together adds nothing to the basic equation.   *AT&T v. Excel* at 1453 quoting *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994).

Examiner finds that Applicant's references to "an entity" in claims 1-21, 23 and 27-28

and "a technical apparatus", "a technical process" and "a technical system" in claims 23

and 26 are just such abstract ideas.

Examiner bases his position upon guidance provided by the Federal Circuit in *In*

re Warmerdam, as interpreted by *AT&T v. Excel*. This set of precedents is within the

same line of cases as the *Alappat-State Street Bank* decisions and is in complete

agreement with those decisions. *Warmerdam* is consistent with *State Street*'s holding

that:

> Today we hold that *the transformation of data, representing <u>discrete dollar</u>*
> <u>*amounts*</u>, *by a machine through a series of mathematical calculations into a*
> *final share price*, constitutes a practical application of a mathematical
> algorithm, formula, or calculation because it produces 'a useful, concrete and
> tangible result" -- *a final share price momentarily fixed for recording purposes*
> *and even accepted and relied upon by regulatory authorities and in*
> *subsequent trades.* (emphasis added) *State Street Bank* at 1601.

True enough, that case later eliminated the "business method exception" in order

to show that business methods were not per se nonstatutory, but the court clearly *did*

not go so far as to make business methods *per se statutory*. A plain reading of the

excerpt above shows that the Court was *very specific* in its definition of the new

practical application. It would have been much easier for the court to say that "business

methods were per se statutory" than it was to define the practical application in the case

as "...the transformation of data, representing discrete dollar amounts, by a machine

through a series of mathematical calculations into a final share price..."

The court was being very specific.

Additionally, the court was also careful to specify that the "useful, concrete and

tangible result" it found was "a final share price momentarily fixed for recording

purposes and even accepted and <u>relied upon</u> by regulatory authorities and in

subsequent <u>trades</u>." (i.e. the trading activity is the <u>further practical use</u> of the real world

<u>monetary</u> data beyond the transformation in the computer – i.e., "post-processing

activity".)

Applicant cites no such specific results to define a useful, concrete and tangible

result. Neither does Applicant specify the associated practical application with the kind

of specificity the Federal Circuit used.

Furthermore, in the case *In re Warmerdam*, the Federal Circuit held that:

> ...[T]he dispositive issue for assessing compliance with Section 101 in this
> case is whether the claim is for a process that goes beyond simply
> manipulating 'abstract ideas' or 'natural phenomena' ... As the Supreme
> Court has made clear, '[a]n idea of itself is not patentable, ... *taking several*
> *abstract ideas and manipulating them together adds nothing to the basic*
> *equation*. In re Warmerdam 31 USPQ2d at 1759 (emphasis added).

Since the Federal Circuit held in *Warmerdam* that this is <u>the</u> "dispositive issue"

when it judged the usefulness, concreteness, and tangibility of the claim limitations in

that case, Examiner in the present case views this holding as the dispositive issue for

determining whether a claim is "useful, concrete, and tangible" in similar cases.

Accordingly, the Examiner finds that Applicant uses an abstract term "entity", which

could mean almost anything. According to inventor's own description, page 4, line 1 of

the disclosure says: "It should be noted that said entity may be almost any entity."

Similarly, the abstract terms "technical apparatus", "technical process" and "technical

system" can represent almost anything, and therefore are not tangible. Furthermore, a

mere addition of a word "technical" doesn't limit the claims to practical applications in

the technological arts.

Since the claims are not limited to <u>exclude</u> such abstractions, the broadest

reasonable interpretation of the claim limitations <u>includes</u> such abstractions. Therefore,

the claims are impermissibly abstract under 35 U.S.C. §101 doctrine.

Since *Warmerdam* is within the *Alappat-State Street Bank* line of cases, it takes

the same view of "useful, concrete, and tangible" the Federal Circuit applied in *State*

Street Bank. Therefore, under *State Street Bank*, this could not be a "useful, concrete

and tangible result". There is only manipulation of abstract ideas.

The Federal Circuit validated the use of *Warmerdam* in its more recent *AT&T*

Corp. v. Excel Communications, Inc. decision. The Court reminded us that:

> Finally, **the decision in In re Warmerdam**, 33 F.3d 1354, 31
> USPQ2d 1754 (Fed. Cir. 1994) **is not to the contrary.** *** The court found
> that the claimed process did nothing more than manipulate basic
> mathematical constructs and <u>concluded that 'taking several abstract ideas
> and manipulating them together adds nothing to the basic equation'</u>;
> hence, the court held that the claims were properly rejected under §101 ...
> Whether one agrees with the court's conclusion on the facts, <u>the holding of
> the case is a straightforward application of the basic principle that mere laws
> of nature, natural phenomena, and abstract ideas are not within the
> categories of inventions or discoveries that may be patented under §101</u>.
> (emphasis added) AT&T Corp. v. Excel Communications, Inc., 50
> USPQ2d 1447, 1453 (Fed. Cir. 1999).

Remember that in *In re Warmerdam*, the Court said that this was <u>the dispositive</u>

<u>issue</u> to be considered. In the *AT&T* decision cited above, the Court <u>reaffirms</u> that this is

the issue for assessing the "useful, concrete, and tangible" nature of a set of claims

under 101 doctrine. Accordingly, Examiner views the *Warmerdam* holding as the

dispositive issue in this analogous case.

The fact that the invention is merely the manipulation of *abstract ideas* is clear.

The objects referred to by Applicant's phrases "entity", "technical apparatus", "technical

process" and "technical system" do not provide <u>limitations</u> in the claims to practical

applications in the technological arts. Consequently, the necessary conclusion under

AT&T, State Street and *Warmerdam,* is straightforward and clear.   The claims take

several abstract ideas (i.e. "entity", "technical apparatus", "technical process" and

"technical system") and manipulate them together adding nothing to the basic equation.

Claims 1-21, 23 and 27-28 are, thereby, rejected under 35 U.S.C. §101.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 21, 24 and 25 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claim 21 recites the limitation "said indications which indicate said conditions and

cases" in line 4. There is insufficient antecedent basis for this limitation in the claim.

As per claim 24, it is unclear how a technical apparatus, technical process and

technical system can constitute a vehicle. A vehicle can be referred to as a technical

apparatus or a technical system, however, Examiner does not understand how a

technical process can constitute a material object such as a vehicle. Another problem

with this claim is that its parent claim 23 defines an entity as one of the group of a

technical apparatus, technical process or a technical system, while claim 24 defines all

of them to form a single object (i.e. "vehicle"). Therefore, the meaning of claim 24 is not clear in view of its ancestor claims 1 and 23.

Claim 25 contains the same problems as claim 24, except for using the phrase "an unmanned or manned aircraft" instead of "a vehicle".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 1-14 and 22-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Rasinski et al. (US Patent No. 4,959,015).

Claim 1

Rasinski (015) teaches a device for generating decision support for decisions which determine and/or control the behavior of an entity (the device is disclosed as a simulator for training a pilot, see col. 1, lines 11-15), comprising:

a supervising unit arranged to handle a rule system for the behavior (Fig. 1, CPU 10; col. 2, lines 52-59), wherein the supervising unit comprises at least one storage member in which a set of rules for the behavior is stored (Fig. 1, digital memory 16; col. 2, lines 63-68),

a user interface including first means for presenting information to a user of the device (Fig. 1, display 32; col. 3, lines 22-26) and second means for inputting instructions to said supervising unit (Fig. 1, input 14, keyboard 32, trainer input 36; col. 2, lines 60-62, col. 3, lines 19-22, col. 3, lines 30-32),

the device being operable with a first automatic rule handler which automatically executes said rules according to a predetermined program for the rule handling (disclosed as a simulation mode, see Fig. 1, CPU 30; col. 3, lines 19-22. Rules are automatically executed; see col. 4, lines 12-14),

the device being operable with a second rule handler which enables a user, by instructions via said second means, to indicate an alternative to the automatic execution by the first rule handler, such that the second rule handler is activated and executes the rules in accordance with said instructions from the user at the same time that the first rule handler continues the automatic execution (col. 3, lines 14-18), the device being further operable such that said first means at the same time is able to present information concerning the rule handling which is carried out by the first rule handler and the rule handling which is carried out by the second rule handler (col. 3, lines 32-41).

Claim 2

Rasinski (015) teaches a device according to claim 1, wherein the rule system is divided into a plurality of states for different parts of said behavior (plurality of states is

disclosed as threat scenarios, see col. 2, lines 56-59, Fig. 2; col. 3, lines 55-57), and

wherein each state includes at least one of said rules (Fig. 4; col. 4, 53-56).

Claim 3

Rasinski (015) teaches a device according to claim 2, wherein the rule system is

divided into a plurality of rule blocks, each of which includes at least one rule, wherein

each state includes at least one block, wherein the rules within a certain rule block

relate to a certain aspect of the behavior within the corresponding state (rule blocks are

disclosed as parts of a scenario, see col. 4, lines 14-15, for examples of rule blocks

such as acquisition and launch sequence. See also col. 4, lines 23-40 for a disclosure

of rules being executed inside of a rule block).

Claim 4

Rasinski (015) teaches a device according to claim 2, wherein names which

identify said states, rule blocks and/or rules, automatically or in response to a command

entered via said second means, are presented to a user with said first means (Fig. 2;

col. 3, lines 55-57; col. 3, lines 22-26).

Claim 5

Rasinski (015) teaches a device according to claim 4, further comprising means,

associated with said first means, for presenting a plurality of names which concern

different states, wherein the name of the state in which said first rule handler exists, is

marked with a first kind of marking (Fig. 3; col. 32-41, where the first kind of marking is disclosed by the displayed information being superimposed upon other representative display format. See also col. 4, lines 18-21 where "4" is an example of a state name).

Claim 6

Rasinski (015) teaches a device according to claim 5, wherein when the second rule handler is activated by instructions from a user, the name of the state in which said second rule handler exists, is marked with a second, different kind of marking, wherein both the first and second markings are capable of being simultaneously presented by said first means (Fig. 3; col. 32-41, where the second kind of marking is disclosed as a regular output on a cockpit instrument display, unlike the first kind of marking which that was superimposed upon other representative display format).

Claim 7

Rasinski (015) teaches a device according to claim 2, wherein said first means provides a decision support window which includes at least one area which represents a state, wherein the area includes names which identify at least different rules which form part of the state (Fig. 2; col. 3, lines 55-57. Decision support is disclosed as a scenario screen showing a mission summary page, where states are represented by threats and rules are indicated by various values associated with a threat such as range at initial engagement, ACQ to launch time, etc. For examples see col. 3, lines 57-68, col. 4, lines 1-8).

Claim 8

Rasinski (015) teaches a device according to claim 7, wherein said area includes at least names of a plurality of rules, wherein the name of the rule or rules which are activated for the moment according to at least one of said first and second rule handler are provided with markings which indicate that the rule or the rules in question are activated (Fig. 2; col. 3, lines 55-57. Decision support is disclosed as a scenario screen showing a mission summary page; Fig. 3, col. 4, lines 18-23 disclose the decision support window where the activation of rules for target acquisition of a specific threat are indicated by showing threat's position and name on the screen).

Claim 9

Rasinski (015) teaches a device according to claim 8, wherein when the second rule handler is activated by instructions from a user, the name of the rule or rules which are activated according to said first rule handler is marked with a first kind of marking, while the rule or rules which are activated according to said second rule handler are marked with a second, different kind of marking (Fig. 3; col. 32-41, where the first kind of marking is disclosed by the displayed information being superimposed upon other representative display format. See also col. 4, lines 18-21 where "4" is an example of a state name. The second kind of marking is disclosed as a regular output on a cockpit instrument display, unlike the first kind of marking which that was superimposed upon other representative display format).

Claim 10

Rasinski (015) teaches a device according to claim 7, wherein said area also includes the name of at least one block which forms part of the state (col. 4, lines 43-47 disclose displaying a name of the rule block "missile approach" that further consists of rules for counting time before encounter, dispatching flares, etc.).

Claim 11

Rasinski (015) teaches a device according to claim 1, further comprising means, operable in response to a command via said second means, for deactivating the second rule handler (Fig. 4, items 102, 108; col. 4, lines 57-68).

Claim 12

Rasinski (015) teaches a device according to claim 7, wherein said second means includes means for naming at least different rules, the names of the rules which have been named by the user, and which form part of a certain state, being automatically shown within said area, when said area which represents the state in question is shown in said decision support window (Fig. 2, col. 3, lines 55-66. Rule names are disclosed as visual indications of numerical values that construct each rule, such as coordinates, time values, etc. Line 1 in Fig. 2 shows a selected state with its associated rule names).

Claim 13

Rasinski (015) teaches a device according to claim 7, wherein said plurality of states are organized in at least one of a network and a hierarchy of states (Fig. 2, col. 3, lines 55-66, where states are disclosed as threats listed as a hierarchy of sequential elements on the list, and named by their number in the list (see col. 4, lines 19-21)), wherein the device further includes means for allowing a user to modify the states by performing at least one of the activities which include naming states, adding states, removing states, and changing the position of the states in the network or hierarchy (Fig. 2, col. 5, lines 17-24), wherein when said decision support window is shown, a plurality of states are automatically shown, and wherein the states are automatically shown in accordance with the modifications of the states which the user has carried out (Fig. 2, col. 5, lines 15-17).

Claim 14

Rasinski (015) teaches a device according to claim 1, wherein the rule system is divided into at least one of a plurality of states (plurality of states is disclosed as threat scenarios, see col. 2, lines 56-59, Fig. 2; col. 3, lines 55-57) and rule blocks for different parts of said behavior (rule blocks are disclosed as parts of a scenario, see col. 4, lines 14-15, for examples of rule blocks such as acquisition and launch sequence. See also col. 4, lines 23-40 for a disclosure of rules being executed inside of a rule block), the device further includes means. operable in response to an advance user command via said second means for defining that, for a certain state or a plurality of states and/or rule

blocks, the rules which form part of the state and/or the rule block shall not be activated automatically, whereby the behavior of the entity in these states and/or rule blocks is always handled manually (col. 5, lines 8-12, where the parts of rule handling may be excluded from automatic activation by changing the status of the countermeasures system).

Claim 22

Rasinski (015) teaches a storage medium for storing a computer program, wherein the storage medium carries a computer program which is such that when it is implemented in a supervising unit connected to a user interface (Fig. 1, EEPROM RAM 16; col. 2, lines 63-68), the computer program providing a first automatic rule handler which automatically executes rules according to a predetermined program for rule handling (disclosed as a simulation mode, col. 3, lines 19-22. Rules are automatically executed; see col. 4, lines 12-14), and a second rule handler which enables a user, by instructions via said second means, to indicate an alternative to the automatic execution by the first rule handler such that the second rule handler is activated and executes the rules in accordance with said instructions from the user at the same time that the first rule handler continues the automatic execution (col. 3, lines 14-18), wherein the first means at the same time is able to present information concerning the rule handling which is carried out by the first rule handler and the rule handling which is carried out by the second rule handler (col. 3, lines 32-41).

Claim 23

Rasinski (015) teaches a device according to claim 1, wherein said entity is selected from the group consisting of a technical apparatus, a technical process or a technical system (the device is disclosed as a simulator for training a pilot, see col. 1, lines 11-15).

Claim 24

Claim 24 is rejected as best understood by the Examiner.

Rasinski (015) teaches a device according to claim 23, wherein said technical apparatus, technical process and technical system constitutes a vehicle (col. 1, lines 11-15).

Claim 25

Claim 25 is rejected as best understood by the Examiner.

Rasinski (015) teaches a device according to claim 23, wherein said technical apparatus, technical process or technical system constitutes an unmanned or manned aircraft (col. 1, lines 11-15).

Claim 26

Rasinski (015) teaches a device according to claim 23, wherein said device includes means, by the execution of said rules, for automatically controlling at least a part of the behavior of said entity (col. 4, lines 14-17).

Claim 27

Rasinski (015) teaches a system comprising: an entity; a device for controlling

the behavior of the entity (col. 1, lines 11-15, where the entity is an aircraft, and the

device is an interactive simulator), the device including a first automatic rule handler

which automatically executes rules according to a predetermined program for the rule

handling (disclosed as a simulation mode, see Fig. 1, CPU 30; col. 3, lines 19-22.

Rules are automatically executed; see col. 4, lines 12-14), a second rule handler which

enables a user, by instructions via said second means, to indicate an alternative to the

automatic execution by the first rule handler, such that the second rule handler is

activated and executes the rules in accordance with said instructions from the user at

the same time that the first rule handler continues the automatic execution (col. 3, lines

14-18), said first means at the same time is able to present information concerning the

rule handling which is carried out by the first rule handler and the rule handling which is

carried out by the second rule handler (col. 3, lines 32-41).

Claim 28

Rasinski (015) teaches a system according to claim 27, wherein when said

second rule handler is activated, said entity is controlled by this second rule handler,

wherein when the second rule handler is deactivated, the control of the entity returns to

the first rule handler (col. 3, lines 42-45 disclose deactivating the simulator while

switching to the manual mode; col. 3, lines 20-22 disclose switching back and forth

between the simulation and manual modes).

Claim 29

Rasinski (015) teaches a system according to claim 27, wherein said entity is a

manned or unmanned aircraft (col. 1, lines 11-15).

Claim 30

Rasinski (015) teaches a system according to claim 29, further comprising a

storage medium for storing a computer program (Fig. 1, EEPROM RAM 16; col. 2, lines

63-68), wherein the storage medium carries a computer program which is such that

when it is implemented in the supervising unit and the supervising unit is connected to

the user interface the behavior of the entity is controlled (Fig. 1, CPU 10; col. 2, lines

52-59).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rasinski et al. (US Patent No. 4,959,015) in view of Cypher at al. (US Patent No. 5,566,295).

Claim 15

Claim 15 is depended upon claim 1 rejected under U.S.C. §102(b) above as being anticipated by Rasinski (015).

Although Rasinski (015) teaches a device according to claim 1, he fails to teach that one of the rules includes at least one predetermined and pre-programmed premises which can either be true or false and at least one predetermined and pre-programmed conclusions, wherein each premise in the rule is assigned an indicator which can indicate three different conditions, including a first condition that the premise shall be true, a second condition that the premise shall be false and a third condition that it does not matter whether the premise is true or false, wherein at least one conclusion is carried out if all of said premises fulfill the conditions set by the assigned indicators.

However, Cypher (295) teaches a device, wherein one of the rules (col. 6, lines 48-50) includes at least one predetermined and pre-programmed premises (col. 6, lines 50-53) which can either be true or false and at least one predetermined and pre-programmed conclusions (col. 6, lines 53-58, premises are represented by "before" states which may either occur or not occur during execution, thus being either true or false, and conclusions are represented by "after" states), wherein each premise in the rule is assigned an indicator (col. 15, lines 29-41) which can indicate three different

conditions, including a first condition that the premise shall be true, a second condition that the premise shall be false and a third condition that it does not matter whether the premise is true or false (col. 15, lines 50-56, where combining an expression with Boolean operators allow to specify at least three different conditions in the condition menu), wherein at least one conclusion is carried out if all of said premises fulfill the conditions set by the assigned indicators.

Rasinski (015) and Cypher (295) are analogous art since they both belong the field of graphical simulation, including a vehicle simulation. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the simulator software from Rasinski (015) (col. 1, lines 50-54). The motivation for doing so would have been to enable the ordinary simulation user to program a simulation without requiring specialized knowledge of computer programming languages or concepts (Cypher (295), col. 7, lines 17-20) and to enable the user to program novel simulation behaviors that had not been anticipated by the simulation creators (Cypher (295), col. 3, lines 45-47). Therefore, it would have been obvious to modify Rasinski (015) in view of Cypher (295) by combining a vehicle simulation device with a rules system.

Claim 16

Claim 16 is dependent upon claim 15, rejected under 35 U.S.C. §103(a) above.

Rasinski (015) fails to teach a device according to claim 15, wherein each conclusion in the rule is assigned an indicator which can indicate two different cases, a first case which indicates that the conclusion shall be carried out and a second case which indicates that the conclusion shall not be carried out. wherein a conclusion is carried out if all of said premises in the rule fulfill the conditions set by the assigned indicators and the indicator of the conclusion indicates said first case.

However, Cypher (295) teaches a device according to claim 15, wherein each conclusion in the rule (col. 6, lines 53-58) is assigned an indicator (col. 15, lines 29-41) which can indicate two different cases, a first case which indicates that the conclusion shall be carried out and a second case which indicates that the conclusion shall not be carried out, wherein a conclusion is carried out if all of said premises in the rule fulfill the conditions set by the assigned indicators and the indicator of the conclusion indicates said first case (col. 15, lines 29-41; col. 17, lines 17-24. Conclusion here is a resulting part of a rule, where indicator is described by a condition that has to be met for the rule to be executed).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the indicators from Cypher (295) and combine them with the simulator software from Rasinski (015) (col. 1, lines 50-54), using the same motivation as for claim 15 above.

Claim 17

Claim 17 is dependent upon claim 15, rejected under 35 U.S.C. §103(a) above.

Rasinski (015) fails to teach a device according to claim 15, including means, operable on command from a user, for showing at least one of said rules with said user interface, and further comprising means, operable by a user with the help of said second means of the user interface, for changing the indications of said indicators.

However, Cypher (295) teaches a device according to claim 15, including means, operable on commend from a user, for showing at least one of said rules (col. 6, lines 48-50) with said user interface (Fig. 1, elements 14 and 16; col. 6, lines 11-13), and further comprising means, operable by a user with the help of said second means of the user interface (Fig. 1, element 14; col. 6, lines 11-12), for changing the indications of said indicators (Fig. 5B; col. 15, lines 42-50. Indicators are disclosed in a form of property conditions, which may be changed through a condition menu).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the interface from Cypher (295) and combine them with the simulator software from Rasinski (015) (col. 1, lines 50-54), using the same motivation as for claim 15 above.

Claim 18

Claim 18 is dependent upon claim 17, rejected under 35 U.S.C. §103(a) above.

Rasinski (015) teaches a device according to claim 17, further comprising means for changing said indications, the changing means requiring user operation of at least one depressions of at least one of a key and a button (Fig. 1, input 14, keyboard 32, trainer input 36; col. 2, lines 60-62, col. 3, lines 19-22, col. 3, lines 30-32).

Claim 19

Claim 19 is dependent upon claim 15, rejected under 35 U.S.C. §103(a) above.

Rasinski (015) fails to teach a device according to claim 15, wherein at least some of said premises and conclusions comprise at least one parameters which can be modified. wherein in response to a command from a user via said user interface the device presents a parameter window which shows at least one premise or conclusions and wherein the user using said user interface can modify the parameter or the parameters in said premises or conclusion.

However, Cypher (295) teaches a device according to claim 15, wherein at least some of said premises and conclusions comprise at least one parameters (col. 9, lines 32-34. Parameters are disclosed as properties associated with objects that may form "before" or "after" states) which can be modified, wherein in response to a command from a user via said user interface (Fig. 1, elements 14 and 16; col. 6, lines 11-13) the device presents a parameter window (Fig. 3B; col. 9, lines 38-46) which shows at least one premise or conclusions and wherein the user using said user interface can modify the parameter or the parameters in said premises or conclusion.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the parameters from Cypher (295) and combine them with the simulator software from Rasinski (015) (col. 1, lines 50-54), using the same motivation as for claim 15 above.

Claim 20

Claim 20 is depended upon claim 1 rejected under U.S.C. §102(b) above as being anticipated by Rasinski (015).

Rasinski (015) fails to teach a device according to claim 1, wherein the rule system is divided into a plurality of states, wherein each state comprises a plurality of said rules, which are divided into at least one rule blocks which concern different aspects of the state, wherein the rule or rules which form part of a certain rule block on command from a user via said user interface is shown as a rule block window.

However, Cypher (295) teaches a device according to claim 1, wherein the rule system is divided into a plurality of states, wherein each state (col. 10, lines 66-67) comprises a plurality of said rules (col. 6, lines 48-50), which are divided into at least one rule blocks (col. 10, lines 25-28) which concern different aspects of the state, wherein the rule or rules which form part of a certain rule block on command from a user via said user interface is shown as a rule block window (Fig. 3C; col. 10, lines 31-34).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include the rule structure from Cypher (295) and combine them with the simulator software from Rasinski (015) (col. 1, lines 50-54), using the same motivation as for claim 15 above.

Claim 21

Claim 21 is dependent upon claim 20, rejected under 35 U.S.C. §103(a) above.

Claim 21 is rejected as best understood by the Examiner.

Rasinski (015) fails to teach a device according to claim 20, wherein in said rule

block window are shown all premises and conclusions which form part of the different

rules which form part of the rule block, wherein for each rule in the rule block said

indications which indicate said conditions and cases are shown as indicators for the

respective premises and conclusions.

However, Cypher (295) teaches a device according to claim 20, wherein in said

rule block window (Fig. 3C; col. 10, lines 31-34) are shown all premises and conclusions

which form part of the different rules which form part of the rule block (col. 11; lines 2-6),

wherein for each rule in the rule block said indications which indicate said conditions

and cases are shown as indicators (Fig. 5B, item 87; col. 15, lines 42-46) for the

respective premises and conclusions.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to include the interface from Cypher (295) and combine them with the

simulator software from Rasinski (015) (col. 1, lines 50-54), using the same motivation

as for claim 15 above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.   Herzberg et al. (US Patent No. 5,023,791) teaches an

automated test apparatus for aircraft flight controls.   Berner et al. (US Patent No. 5,260,874) teaches an aircraft flight emulation test system. Tran et al. (US Patent No. 5,549,477) teaches an integrated aircraft survivability equipment in-flight simulation. Tran (US Patent No. 5,606,500) teaches a state machine for integrated ASE sensors. Tzidon et al. (US Patent No. 5,807,109) teaches an airborne avionics simulator system. Briffe et al. (US Patent No. 5,978,715) teaches an apparatus and method for aircraft display and control.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sergey Datskovskiy whose telephone number is (571) 272-8188. The examiner can normally be reached on Monday-Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (571) 272-3687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.   Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
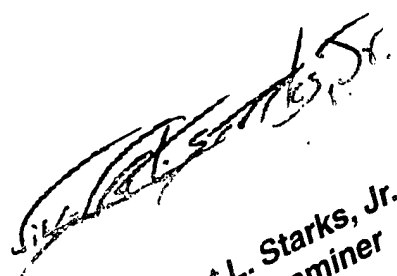
you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

S.D.

Assistant examiner

A.U. 2121

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit - 2121